CHESS – Web Weekly 7

The week started out promising despite some high swells left by hurricane Ivo, with mostly calm seas and only scattered clouds. We made two successful sets at the beginning of the week - recapturing our previously tagged focal animal and two of the valuable roto-tagged dolphins. Then the weather figured out a new way to torment us -- lovely calm seas with little swell, but a steady supply of rain and thunderstorms cruising all around us for the next 3 days, whipping up the seas locally for an hour or two at a time. For our set operations, we need at least a 3-hour good-weather window, so we patiently waited, and waited, and waited..... In the mean time, we continued tracking our radio tagged animal 24-hrs a day, consoling ourselves that at least the tag was recording great diving behavior data. Then, on the evening of September18th, the radio transmissions suddenly stopped, and despite our best efforts to relocate the animal, the signal was never heard again. We suspect the transmitter or attachment failed, because the signal had been strong and stopped so suddenly. Very disappointing!

But at least the weather improved again the following day, and we were able to catch some new dolphins. The tagging operations went very well, and we (finally!) deployed our first thermal tag on a male spotted dolphin. The thermal tag is designed to see if the dolphins may be susceptible to "overheating" during chase and capture. It contains the usual radio transmitter for tracking, a time-depth-velocity recorder for recording dive behavior, and a temperature/heat flux data logger. The heat flux sensor is attached to the saddle by way of a spring that allows it to rest up gently against the skin of the dorsal fin. The data logger records skin temperature and heat flux from the dolphin's dorsal fin every 6 seconds. Combined with the diving behavior, this tag offers unique insights into heat regulation in free-swimming dolphins. Only catch is, we have to track the animal continuously until we can recapture it again to download the data. Tracking this tag for the next 24 hours was an adventure in patience, alertness, and suspense, because the radio range was much shorter than for our other tags. But we managed to stay with the animal throughout the night, and we recaptured it after a total deployment time of 23 hours and 30 minutes! Best of all, this set turned out to be our sampling jackpot for the trip, including a total of five tagged animals caught the day before (thermal tag dolphin plus four roto-tagged dolphins). We obtained blood and skin samples from all of them, removed the thermal tag, and switched to a new focal dolphin.

Our other adventures for the week included multiple attempts on the lives of our three small inflatable boats, which we use to transport 12-13 people and 4-6 rafts to the net for sampling operations. Boat #2 is now on disability leave until we return home, because of a large hole that can't be patched out here. Boat #1 is currently in pieces, to repair a burned-out starter without the proper spare parts. And Boat #3 is working overtime to do all the extra work, with help from our speedboat-driving friends on the tuna vessel. We have only about one week left in the study area before beginning our transit home, and we are eager to get a few more sets done. At the moment, however, it looks like tropical storm Juliette (soon to be hurricane) is heading towards us. Better get out of the way! More next week…